Probability 10-8-09 Name:

1. What is sample space?
2. What is an outcome?
3. What is the difference between theoretical probability and experimental probability?
4. Which of the following are independent events:
   1. rolling a die and flipping coin
   2. drawing a card from a deck of cards, and drawing another card from the same deck
   3. rolling a die, and then rolling it again
   4. drawing a piece of candy from a jar, and then drawing another piece of candy
5. A bag contains 4 red marbles, 16 yellow marbles, 5 purple marbles, 16 blue marbles, and 10 green marbles. What is the probability of pulling out a red or a green marble?
6. You have a jar filled with cookies. You have 10 snickerdoodles, 5 chocolate chip, and 5 sugar cookies. What is the probability that you will select a snickerdoodle and then a sugar cookie?
7. You are drawing cards from a regular deck of cards. What is the probability that you will draw a red queen and then a black seven?
8. A deck of cards has 3 blue, 4 black, and 6 purple cards. You pick 2 cards from the deck. Cards are not returned to the deck after they are picked.  
   Find P(two blue cards in a row)
9. A deck of cards has 5 pink, 6 orange, 3 purple, and 5 navy cards. You pick 2 cards from the deck. Cards are not returned to the deck after they are picked.  
   Find P(the first card is pink and the second card is purple)
10. There are 4 yellow, 6 black, and 4 pink marbles in a hat. You pick 3 marbles from the hat. Marbles are not returned after they have been drawn.  
    Find P(the first marble is black, the second marble is not pink, and the third marble is yellow)
11. A deck of cards has 6 yellow, 4 blue, and 5 black cards. You pick 4 cards from the deck. Cards are not returned to the deck after they are picked.  
    Find P(four blue cards in a row)